

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US01/32028

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06F 9/45, 17/30; G06K 9/48, 62;  
US CL :707/3; 717/11; 382/225

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 707/3; 717/11; 382/225

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,E	US 6,314,420 B1 (LANG et al.) 06 November 2001, col. 4, lines 5-41, col. 9, lines 1-67, 14, lines 54-67, col. 17, lines 58-67, col. 19, lines 23-28, col. 20, lines 25-67.	1-24
A	US 4,937,747 A (KOLLER) 26 June 1990.	1-24
A,E	US 6,307,965 B1 (AGGARWAL et al.) 23 October 2001.	1-24
A,P	US 6,226,792 B1 (GOIFFON et al.) 01 May 2001.	1-24
Y	US 5,859,929 A (ZHOU et al.) 12 January 1999, col. 6, lines 5-12, col. 9, lines 50-67, col. 10, lines 1-10, col. 11, lines 14-33.	1-24

Further documents are listed in the continuation of Box C.  See patent family annex.

*A*	Special categories of cited documents.	*P*	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*M*	document defining the general state of the art which is not considered to be of particular relevance	*X*	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E*	earlier document published on or after the international filing date	*Y*	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*D*	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*F*	document member of the same patent family
*O*	document referring to an oral disclosure, use, exhibition or other means		
*P*	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report
17 DECEMBER 2001	10 JAN 2002

Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer CHARLES RONALD <i>James R. Matthews</i> Telephone No. (703) 306-3030
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**C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,799,276 A (KOMISSARCHIK et al.) 25 August 1998.	1-24